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ABSTRACT

A workshop was conducted to examine educational materials developed in countries in Asia and the Pacific in order to make available exemplary materials to share with other educators in the region. This booklet is a product of that workshop. It includes an overview of the innovative materials selected and two chapters describing innovative projects and materials and follow-up plans for national workshops. The projects and materials profiled include the following: (1) learning to learn; (2) extension study materials; (3) the multimedia approach; and (4) research and evaluation. An appendix lists sources of original materials. (KC)

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ASIA AND THE PACIFIC PROGRAMME
OF EDUCATIONAL INNOVATION FOR DEVELOPMENT

APEID

SHARING INNOVATIVE STRATEGIES FOR SELF-LEARNING MATERIALS

A MONOGRAPH

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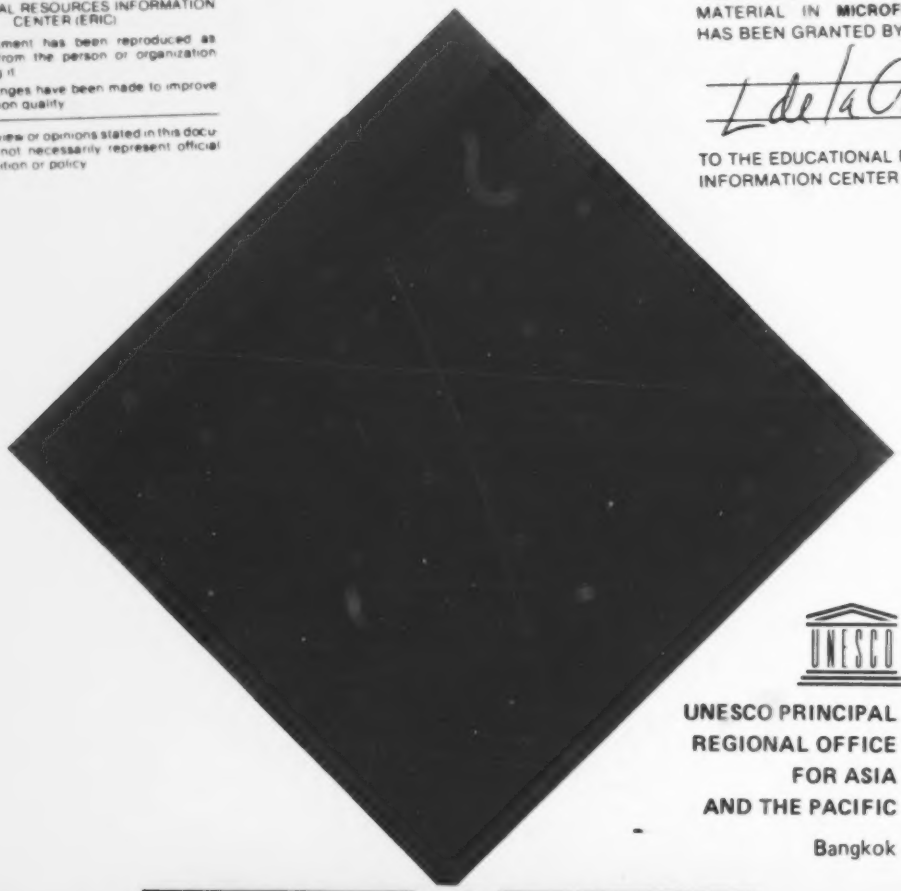

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Bangkok, 1988

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PREFACE

Education is widely accepted as an essential contributor to the development of human resources and national economies. The last few decades have witnessed a rapid expansion of educational facilities with a consequent need to spread resources thinly. Teachers are under increasing pressure to act as agents of change.

The explosion of information technology has caused the present age to be characterized as one of instant communication. Time and distance have been spanned by satellite communications, telelinks and the electronic transmission of texts and images. Information, and the abilities to transmit, receive and process it, are increasing rapidly, as are new, teaching learning technologies.

In many countries the opportunity to use this new technology is not keeping pace with the rate of its development. Educational development, and thus national development, are becoming increasingly dependent on a country's ability to utilize educational technology at all levels in its education system.

This Regional Study Group Meeting addressed this problem by identifying innovative strategies being used by educational technologists in the preparation of training packages. From a survey of the exemplar materials provided by the participants, materials which were innovative, adaptable and widely applicable were chosen to be developed into exemplar modules.

It is hoped that the examples selected will be of assistance to personnel involved in the production of training packages within the region.

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INTRODUCTION

A Regional Study Group Meeting on the Compilation of Reference Materials and Training Packages, including Distance Learning Materials was organized by the UNESCO Principal Regional Office for Asia and the Pacific (PROAP), Bangkok, under the Asia and Pacific Programme of Educational Innovation for Development (APEID), in collaboration with the Korean Educational Development Institute (KEDI), from 27 October to 5 November 1987. The Regional Study Group Meeting, held in Seoul, Republic of Korea, was attended by personnel involved in distance education from five UNESCO member states, namely India, New Zealand, Pakistan, Republic of Korea and Western Samoa and from one United Nations member state, Vanuatu.

The main objectives of the workshop were to:

1. review and examine the exemplary materials brought by the participants with a view to:
   (a) preparing descriptions or headings by which the materials can be described in printed form;
   (b) outlining the effective strategies and techniques for the application of these materials to distance education requirements;
   (c) identifying the common characteristics of the materials presented at the meeting with a view to identifying basic elements;
   (d) choosing the most effective instructional design.
2. specify the skills required by the user of the materials to make the resource material of training packages adaptable and workable.
3. prepare a general users guide and
4. develop a follow-up plan for organizing National Workshops on the compilation of reference materials and training packages.

In the group-work during the Study Group Meeting, special attention was given to:

1. selecting those exemplary materials which demonstrated innovative approaches or which introduced new ideas or concepts in resource development;
2. writing abstracts of the exemplars chosen, ensuring that the significant features and innovative ideas were highlighted;
3. compiling the final report in a manner which enabled the exemplar modules to be easily adapted and widely applicable for use by the countries of the region.

Self-learning materials

From this intensive examination, the Regional Study Group identified the following significant material:

1. *Learning to Learn*
   a. Innovative Method of Self-learning
   b. Innovative Motivation of Students
2. *Extension Study Materials*
   a. Preparing Course Writers in Extension Studies
   b. Choosing a Textbook
   c. Making an Audio Tape
3. *The Multimedia Approach*
   a. Developing a Source Book for Distance Education
   b. Teleconferencing: Designing a Distance Teaching Programme
   c. Computer Teaching at a Distance
4. *Research and Evaluation*
   a. Using Research Support in Distance Education

Outcomes

The principal outcome of the Regional Study Group Meeting is this publication which takes note of the significant development of resource materials that have been produced by countries in the region and provides an opportunity for such development to be shared. The materials compiled contain suggestions for the future development of innovative training materials.

Chapter One

OVERVIEW

An innovation is any persisting change incorporated into the patterns of behaviour of significant proportion of members of a specified educational system. All educational systems have certain expectations of how innovation and/or changes come about. Drastic changes in the process by which changes come about (or, in other words, the introduction of different types of strategies for change) will raise new questions and demand strategies related to the innovation in particular situations. The relationship between the innovation and change strategy, therefore, becomes a crucial variable in the outcome of the innovation. The innovation will often be identified with the way it was brought about, and its success to a large extent will be dependent on the success of the strategy.

Successful innovative strategies are dependent on mutual adaptation and development relationship between personnel involved in the educational system. Many educational innovations demand changes in the behaviour of teachers, learners, principals, parents and also other groups involved. The more an innovative effort is characterised by behavioural change, the more it is important to involve the user in all aspects of the innovative process from early identification of needs throughout the process of implementation.

As learning is a process of interaction between the learner, teacher and resource materials, the student is central to this process. However, the influence or involvement of the teacher or resources can vary. In face-to-face learning situations the student and teacher can interact freely and the resources become tools within that interaction. When a student is learning independently from a text book then the teacher (in this case the author of the book) is remote and there is no communication between student and teacher. The resource or text book is the interacting agent. Distance learning is somewhere between these two. The student and the teacher are physically separated but there is still interaction between them. However, the nature and extent of this interaction depends on the distance learning medium and the type of resources employed.

For learning to be efficient and effective, the same principles apply to both face-to-face and distance situations. Essential are motivation and learning skills on the part of the student, high quality teaching skills and the production of relevant resources on the part of the teacher. However, the learning and teaching skills necessary for face-to-face and distance learning may be different, as may the methods of motivation and the type of resources required. Education systems which have effective training procedures for face-to-face and distance learning may be different, as may the methods of motivation and the type of resources required.

Education systems which have effective training procedures for face-to-face teaching often have inadequate training for distance teaching. At times insufficient

attention is paid to the teaching/learning process resulting in a less effective programme than is potentially possible. The key to improving this situation is through the training of educational technologists – the people involved in the development of programmes and resources for the teaching-learning process.

Two important elements of this training process are the skills for:

1. determining the problems and issues which have to be addressed; and
2. implementing new approaches to the solution of the problems.

Within the region many countries are grappling with common problems. A number of innovations have been developed, the sharing of which would provide mutual benefits in time and cost savings. The problem with coping with large numbers of students is common to India, Pakistan and the Republic of Korea. For India and Pakistan this problem is compounded by the students being spread over large geographical distance. A different, but related, problem is faced by New Zealand and the Pacific States. For these nations students are also spread geographically but, with only small populations, the number of students undertaking study in any venue may be too small to be economic. Educational planners in India, Pakistan and the Pacific States face the problem of having many different languages to contend with, as well as a high level of illiteracy. Illiteracy can be a particular problem when the purpose of the educational programme is development oriented. To date, most distance education programmes have been subject oriented and research into development oriented programmes is necessary and urgently required.

The move by nations to require development oriented education, coupled with the information explosion in the last few decades, require curriculum changes. Such changes necessitate teacher retraining programmes on a large scale and within a short time frame.

Ways are being found to produce effective and cost efficient programmes which meet the needs of individuals, communities and nations. One such example is embodied in the University of the South Pacific (USP). This institution, supported by eleven Pacific States, is based in Suva, Fiji, and has Study Centres in ten of the eleven associated countries. Each Study Centre, with its academic and support staff, is linked to the main campus by satellite. This approach helps to address the large distance but small student number problem. In New Zealand, where the students are confined to a single geographic area, a different solution is being developed. Through the use of an interactive, audio teleconference network, small numbers of students in a variety of locations can be assisted.

Relatively low cost technology is also being used in the Republic of Korea, at the secondary level by the Air and Correspondence High School (ACHS), and at the tertiary level by the Korean Air and Correspondence University (KACU). In Pakistan, techniques for bypassing illiteracy are being developed by the Allama Iqbal Open University. Through the use of pictorial flipcharts and audio tapes using local dialects, development oriented programmes are being effectively used in rural communities. At the Indira Gandhi National Open University in India, a comprehensive course for distance educators has been produced. With a rapidly growing

distance education network and the consequent increase in the number of staff involved, such a course is essential as part of the training process. There are new ideas and innovative approaches being used. The key to the future success in the region may be through the sharing of technologies, of resources, but most importantly, of ideas. The summaries of technical papers are presented in alphabetical order.

INDIA

Initially, Distance Education institutions were manned by personnel from the formal system of education and who had little background of distance education. The skills and experience acquired in the formal system, however, were applied to distance education situations, seeking solutions to problems as they arose. In the late seventies, the Central Institute of Educational Technology, National Council of Educational Research and Training, launched a correspondence course for the writing of course materials. This was one of the first attempts in the country to use distance education techniques for the training of distance education personnel. The effort was laudable for its approach in making the course writers understand the needs of the clientele by experiencing distance teaching techniques, and judging for themselves, the potential and limitations of print material as a tool of distance education.

The training programmes organised over the years in distance education can be grouped into three broad categories:

1. On-the job-experience
2. Extension programmes
3. Formal training courses

On-the-job-experience

In the absence of any organised formal training programmes, the new distance education institutions used mainly on-the job experience to train their personnel. The organizations at the national level, however, were advantaged as their key personnel had opportunities for experiences in the form of exchange visits, attachment to distance education institutions and formal training at universities or other specialised institutions. In on-the-job experience the strategy had been a combination of one or more of the following:

1. In-house discussions on strategic points and policies
2. Contribution and discussion of papers to evolve consensus on vital issues
3. Inter-organisational seminars for the exchange of views
4. Development of guide notes and manuals to carry-out operations.
5. Pre-assignment orientation programmes for different personnel.

Self-learning materials

Extension programmes

The organizations at national level provided the lead in offering extension programmes to the personnel of other distance education institutions in the country. Open School, CBSE and Indira Gandhi National Open University organized national programmes at school and university levels. Some programmes were organized in collaboration with UNESCO Regional Office, Bangkok, for key distance educators. The Central Institute of Educational Technology, NCERT, at the all India level, and State Councils of Educational Research and Training (SCERT's) at the state levels have also played a crucial role in the dissemination of distance education. The thrust of such extension programmes can be classified into the following categories according to their purpose:

1. Raising the awareness of the policy planners to the needs and potentialities of distance education, mainly through seminars and conferences
2. Organising groups and meetings to clearly identify the issues relating to distance education and design strategies to give new orientations to distance education organizations
3. Imparting theory and practice to personnel at middle levels
4. Imparting skills to the producers and operators of the system.

Formal training courses

The needs of the expanding systems are still immense. The extension programmes, though doing a commendable service, suffer from limitations. Each is specialised and concentrates on a single aspect, e.g., graphics in course writing or the identification of students' problems in counselling. They lack an overview of distance education and fail to put their own specialisations in proper perspective. Indira Gandhi National Open University saw the need for a formal comprehensive training for distance education and floated a Diploma Course in Distance Education in 1987, the first of its type in the country and perhaps in the region. This opened a wide scope for both the in-service teachers and the new graduates who wished to choose distance education as their career.

Nature of materials

Modern distance education training materials are beginning to be developed. So far the thrust has been on meeting the immediate needs of the clientele, i.e., the students enrolled in the system. This material is mainly in print form but as the technical facilities become available, other media too are being used though more slowly. The print material is available in different forms, viz reports of orientation programmes, guides containing instructions, manuals for operations at different levels and study materials for full term formal courses.

Pooling the resources

Although a large amount of training materials for distance education are being produced in the country, a concerted effort to co-ordinate these materials at

Central level and distribute them, to users on a wider scale has yet to be made. This points to the need for:

1. establishing regular channels for the exchange of materials;
2. developing a distance education centre at the apex level; and
3. evolving a co-ordinated policy for training.

Government policy of promoting universalization of elementary education, and of providing greater accessibility to socially disadvantaged sections of society to educational opportunities, requires improved professional competence, and training of distance educators. In this, making appropriate tools available and disseminating new ideas is paramount.

NEW ZEALAND

Teleconference network

The teleconference network is a cost efficient system designed to enable two way discussion as part of the learning/teaching process in distance education. It uses technology which links microphones and speakers in a number of venues via telephone microwave toll lines. There is no limit to the number of centres which can be linked. The system can be controlled from whichever centre the tutor is based at. Audio visual material, especially slide/tape programmes, are sent to all centres prior to the seminar date. Normal remote controlled apparatus for the projection of slides can be operated in each centre by the tutor. The teleconference network has proved to be very useful for the in-service training of groups with small numbers and who are distributed throughout a region or a country. Considerable use of the network is made by doctors and other healthworkers, agricultural advisers, and teachers colleges.

Postgraduate diplomas for teachers

The New Zealand Government has recently approved two new postgraduate qualifications for teachers – the Higher and Advanced Diplomas of Teaching. Teaching courses for these diplomas is the responsibility of the six teachers colleges. Courses are offered in their region by each of the Colleges.

As well, courses offered by distance teaching methods are administered and controlled by one college. However, all colleges participate in these courses both at the development and tutoring level. A national Curriculum Committee moderates and approves all courses offered, both face-to-face and distance. Colleges must submit a course to this committee for approval before the course is taught. Teachers may select courses from any institution or from the distance offerings. Seven full papers are required to gain a Higher Diploma and a further seven to be granted an Advanced Diploma. All courses are given a code number by the Curriculum Committee and similar courses from different colleges have the same number. In this way a teacher can complete a qualification over a number of years, even though changes of location mean leaving one College district during the study period. The

qualifications are offered by the New Zealand Government, through its Department of Education, not by a College. One college has developed its own regional network of teaching centres, combining face-to-face and distance teaching methods. College lecturers move to centres where teachers gather for evening or weekend seminars. Also the teleconference network is used to supplement face-to-face and distance teaching methods.

PAKISTAN

The correspondence package forms the hard core of the distance education system at the post literacy stage. With the rapid development of distance education programmes in the country, the instructional methodology for the system is being enriched by enthusiastic distance educators through their interaction with varied situations. The skill of writing for distance learners is generally strengthened by the available experience of curriculum planners, textbook writers, and broadcasters. Sometimes this skill is further enriched by a formal training programme, but largely it is derived from the interactive team work of the course personnel who are engaged in the development of the materials from the inception to the production stage. With more than 12 years of hectic involvement in designing, producing, editing and reviewing materials for distance education programmes, Allama Iqbal Open University (AIOU) has been able to produce about 150 courses for various levels/areas/fields of specialization. They include:

1. Pre-Literacy stage (Functional education involving awareness and basic skills)
2. Functional Literacy
3. Basic Agriculture
4. Abridged primary education programme
5. Secondary level programme for women
6. Technical and Vocational
7. Intermediate (Post secondary)
8. Bachelor (BA, BCom, BBA)
9. Teacher Education (English/Arabic Primary Republic, Middle and Secondary)
10. Specialised/Master's level, (MBA, MSc, MA)
11. Advanced Specialisation/Research at MPhil level.

Course development procedure

With about 150 courses being taught and as many as 60-70 more in planning, AIOU has been able to institutionalize a course development procedure for its operation. A new course is generally conceived through a needs assessment process, which may not be a structured activity. Generally the courses are initiated when an explicit need is expressed through a national policy or plan. Occasionally new courses are started on the basis of student feedback which is continuously received

through regional offices and students' advisory cells. Sometimes the need for a programme/course may originate from the proceedings of statutory bodies, such as Committee of Courses, Academic Council, Planning and Development Committee, Research and Technology. Once the need has been determined, the development of a course is undertaken through the following procedure:

1. *Formulation of curriculum:*

   – objectives – concept clusters – course outline-content units

2. *Unit writing:*

   – internal/external writers; unit design including behavioural objectives – activities – self assessment questions – suggestions further readings.

3. *Organizing course team meetings:*

   – involving course team chairman, Chairman of the Department, course co-ordinator, unit writers, reviewers, editors, radio and TV producers, consultants.

4. *Review of draft course materials*

   – senior experts, both internal and external, incorporating new materials or returning materials to unit writers for necessary changes.

5. *Content editing*

   – Mostly by senior internal experts, e.g. course co-ordinator, Chairman of the Department, Director of the Institute, Dean of the Faculty.

6. *Execution of illustrations/Layout*

   – involving artists, calligraphists, designers, copy setters

7. *Printing and Production*

   – Editing
   – Internal/external printers

8. *Storage/Mailing*

   – Inventories of various editions, schedule for revision, reprinting according to stock position.

Self-learning materials

Problems and issues

Like all aspects of education, distance education in Pakistan is also confronted by many problems. These problems, affect the quality of materials produced for distance learner, include: 1) identification of characteristics of clientele for different courses; 2) variation in the quality of materials written by internal and external writers; 3) lack of training facilities for new writers; 4) background of formal teaching institutions affecting attitudes and motivation of distance education writers; and 5) dearth of writers for science and technology.

REPUBLIC OF KOREA

There are two important distance education systems: educational broadcasting, and radio and correspondence courses at the university and senior high school level.

Air and Correspondence High School (ACHS)

ACHS was founded in 1974. The target group of ACHS is the youth Problems population who cannot attend ordinary formal schools because of their jobs and/or for economic reasons. About 75 per cent of ACHS students have jobs and their economic status is low. ACHS education heavily depends on self-learning and radio instruction. The students are given ACHS textbooks, a guidebook for radio instruction and monthly self-learning material. Each Air and Correspondence High School is annexed to a regular high school to make use of existing facilities and personnel at low cost. The students go to near-by schools every other Sunday and regular high school teachers instruct the students for extra payment. Major innovative feature of ACHS noted are:

1. Individual students are provided with a wider variety of instructional materials than can be easily prepared by the classroom teachers;
2. regional gaps in the quality of education and school differences can be decreased by the nationwide radio instruction;
3. new methods of teaching introduced by the radio school broadcasting;
4. children in the remote areas are provided with quality education by the radio and television instruction.

Korean Air & Correspondence University (KACU)

The Air & Correspondence university was founded in 1972 as part of Seoul National University. In 1981 it was reorganized into an independent institution. KACU now offers five year university courses in 12 major fields of study, each leading to a bachelor's degree, and one junior college level course in early childhood education. The university has 12 regional study centres. In addition, there are also 23 local study centres in smaller cities and districts. In the regional study centres, academic and administrative staff of KACU help students by offering seminars, tutorials, counselling and general guidance and extra-curricular activities. Print materials, audio-visual materials and seminars are used in teaching courses. Recent-

ly, computer-assisted instruction materials have been developed for statistics courses. Various media are integrated into an overall learning system. The elctronic media consist of four kinds: radio broadcasting, audio cassette, TV broadcasting, and video cassette. Among these, lectures broadcast over radio have been the most important form of instruction. As well, audio cassettes coupled with printed material are an important method of teaching. Copies of all audio and video materials are available for student use at each of the Regional Study Centres. Counselling material developed by the Student Guidance Centre provides advice on self-learning strategies and stress management. Research and training materials related to distance education are being prepared.

Problems and issues

1. Team approach: the growth of student numbers has resulted in the need for further development of multimedia packages. This requires a co-operative approach between academic and audiovisual production staff.

2. Research into multimedia instruction: constant attempts are being made to improve the quality and effectiveness of technology based programmes. Research into programme design and production is an important facet of the University's work.

3. Humanizing education: it is recognized that distance education does not have the socializing aspect of face-to-face education. Attempts are being made through organizing student contact to improve this aspect.

THE UNIVERSITY OF THE SOUTH PACIFIC (USP)

Established in 1968, the University of the South Pacific (USP), serves eleven (11) countries namely Cook Islands, Fiji, Kiribati, Nauru, Niue, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Western Samoa. The University region thus covers a large area of ocean (and land) and comprises a diversity of cultures. As a regional institution, the USP facilitates higher learning for the people in the member countries. Over the years, two other functions have developed. The first is the provision of short-term training for those already in the service of their particular country, and the second is in making learning opportunities available to the isolated islander. Facilitating the latter is the specific task of the USP Extension Services and, in doing so, the facilities have often been used to enable short term training either by the distance mode or face-to-face teaching during summer schools. Two main problems face the USP:

1. the diversity of needs of the different countries; and
2. the widely scattered locations of students.

In addressing these problems, the USP Extension Services has endeavoured to produce self-learning study materials on a wide variety of courses for its Extension Studies programmes which are vocational (for Certificates and Diplomas), pre-degree, and degree. Courses available include those in Accounting, Administra-

tion, Librarianship, Education, Economics, Mathematics and English to name a few. In addition, short-term, non-credit courses are available through the Extension Services Continuing Education programmes, e.g. basic nutrition and health, rural agriculture, computer awareness, communication skills, basic English and basic mathematics. One very successful Continuing Education programme is that of the Pre-school Teachers' Certificate.

The self-learning materials are primarily in the print mode but other media (audio and video) are employed to supplement the printed materials. The materials are the end-product of course development team work and the books carry self-learning devices such as explicit instruction, self-assessment activities, workbook format, symbols in the margin, and coloured pages to distinguish sections more clearly. Audio and video tapes may be used to introduce a course or provide an interactive supplement, and particularly in the case of the audio mode, present sections that are difficult to clarify in print, e.g. word pronunciation and poetry reading. Because video play back machines are not readily accessible, video tape recordings are not as frequently used as audio tapes. The course development team, course writers and course developer, are all USP academic staff. To familiarize course writers with the course development process, a series of booklets have been prepared by Extension Services. These are: Introducting Extension Services", "Choosing a Textbook for Extension Students", and "Want to Make an Audiotape". A fourth booklet, "Writing a Course for Extension Studies", is currently being developed.

A further problem of the USP is that of language. Study materials need to be in English in order that they can be used throughout the eleven countries. However, for all islanders, English is a second or even third language. To ensure that the printed materials are of the correct readability level, tests on readability such as the Cloze Test, are now being applied during the course development or revision stages. Further, since the identification of the need of French-speaking islanders for study materials, the USP has begun a project of translating some courses into French. Such a widespread distribution of students requires some co-ordinated means of communication. The USP has Regional Centres in each country which serve to administer Extension Services courses and are also the official links between the Institution and the member countries. The Regional Centres are a part of the Extension Services section of the USP and communication with headquarters is effected either immediately by satellite and telephone, or weekly by the airmail bags. Regional Centres also provide student support in the form of local tutorials, letters, phone-calls, and facilitating visits of Campus tutors in addition to satellite tutorials. Thus, whether a student is a Cook Islander, Fijian, i-Kiribati, Nauruan, Niuean, a Solomon Islander, Tokelauean, Tongan, Tuvaluan, ni-Vanuatu or Samoan, the USP has something to offer.

Chapter Two

INNOVATIVE PROJECTS AND MATERIALS

Although the problems and difficulties associated with distance learning are not new, increased demand for this type of education requires new solutions. Technology is helping to provide some of these solutions. Research into distance education is providing new approaches and methods of improving existing ones.

The projects and materials outlined in this chapter were considered by the participants to be examples of innovative approaches to solving the problems of distance education. They have been described and presented in sufficient detail for them to be readily adapted for use by others.

I. LEARNING TO LEARN

A. Innovative Method of Self-learning (India*)

In any teaching learning process the learner is the focal point. This is especially so in a distance-teaching system. All efforts are directed towards maximising the outcome through the process of self-learning. In this process assistance is provided to the learner through the use of different tools, techniques and learning strategies. Distance education systems also provide various alternatives to suit students' needs. However, it is the learner who has to decide which alternative he prefers.

The learner in distance education has to operate under several constraints and for many students it is their first contact with a distance teaching system. Complex as the systems are, the learners need to know how they can make best use of their energy, potential, time and resources and how the systems as a whole can help them. There could be an endless chain of questions which the learner might like to have answered as he enters the system or progresses through his studies. This points to the need for a more concerted effort to make the learner an equal partner in the teaching-learning process and expose him to the full potential that the system offers. In this context students' manuals or study guides acquire a special significance. The document under review is a brief handout aimed at enabling the learners to:

1. ascertain that they have the necessary pre-requisites for studying the course
2. find that they have the required time to study
3. try different ways for the effective study of the course materials
4. develop their own plans of study.

* See Annex IV.

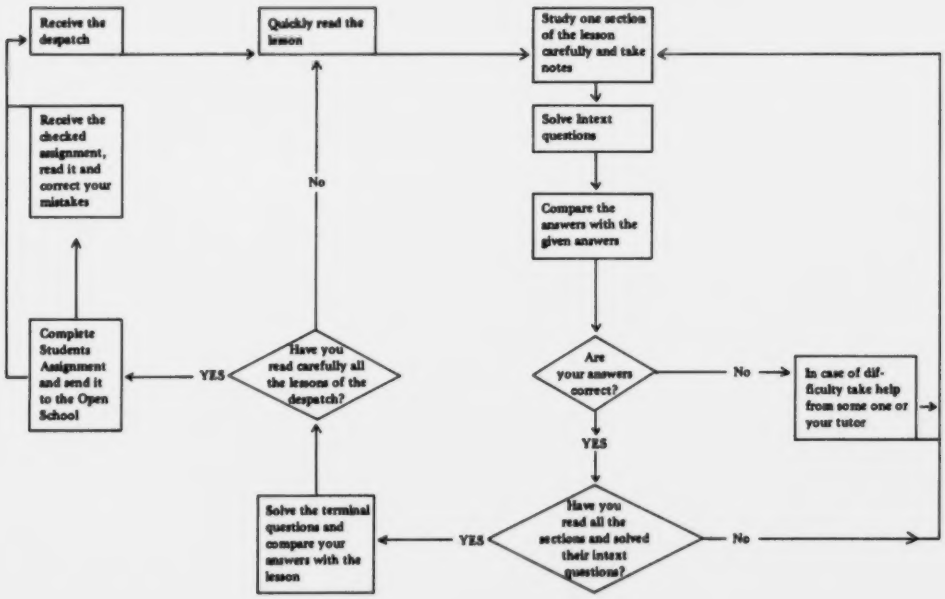
Self-learning materials

To begin with, the guide outlines the pre-requisite levels of achievement necessary to fully appreciate the course and advises the student to take a preparatory course to attain the appropriate level if they find it too hard to follow. In the first few pages the manual gives details of:

1. the number of publications to be received in each course
2. the total number of pages in a course
3. the average number of pages to be studied each day if study is spread evenly over a semester or an academic session
4. other books to be received besides the study material
5. the sections of a unit lesson with particular reference to simplicity of language, links with the previous lessons, tasks set for the students as part of the introduction and objectives, various components and their important highlight
6. self-check exercises (Intext questions), their significance for learning, their link with the main body of the lesson, the types of questions used and the method of answering them
7. students' assignments, their significance as tools to identify strengths and weaknesses, a means of counselling, mode and interval of submission of assignments.

The manual suggests a sequence of study and describes it for the help of the learners in the form of a flow chart reproduced over:

HOW TO STUDY YOUR LESSONS – A FLOW CHART


Receive the despatch
Quickly read the lesson
Study one section of the lesson carefully and take notes
Solve Intext questions
Compare the answers with the given answers
Are your answers correct?
No
In case of difficulty take help from some one or your tutor
YES
Have you read all the sections and solved their intext questions?
No
YES
Solve the terminal questions and compare your answers with the lesson
Have you read carefully all the lessons of the despatch?
No
YES
Compirte Students Assignment and send it to the Open School
Receive the checked assignment, read it and correct your mistakes

This is followed by detailed hints on the programme of supply of study material, services provided at the Study Centres, arrangements for practical work (laboratory work), objectives and frequency of face-to-face contact programmes. The most significant part of the document, however, is the practical suggestions incorporated for strengthening the process of self-study, without going into their theoretical aspects. Below are given a few extracts:

Here are some basic principles of study which we would like to mention for your benefit:

1. You must have a desire and willingness to learn
2. Do not study continuously for a long stretch of time. Rest from time to time. This will help in keeping your interest alive and in maintaining the speed of your studies
3. While studying, keep noting down the important points. Read the lesson once again to check the points taken down by you.
4. When you study the lesson a second time and third time, it helps you to remember it better. So keep some time for revising the lessons.

Method of study

Each student has his own way of studying. You must be also studying in a particular way. A few suggestions are given below. You can improve upon your method of study with their help.

1. Study regularly the whole year round. It is unwise to study only when the examinations are close by.
2. Prepare a plan of study for the entire year or period of study. This must be in keeping with your course. Next, make a weekly time plan. A weekly plan removes confusion and helps you save time. You are thus able to study all the subjects completely and answer your assignments regularly.
3. Do not be disheartened if you find your study difficult at the beginning. Gradually, as you continue to study, your interest will grow. Read a little at a time in the beginning. Slowly increase the time of your study.
4. Make separate note books for each subject in which to make notes. Note down in the proper order all the important points, definitions, formulas, graphs and charts. These will help you prepare for your examinations.
5. Use your knowledge in your day-to-day activities, whenever possible. This will help you learn better.
6. Do not hesitate to take the help of your friend, family member or tutor in understanding the lessons.
7. Before answering the exercise and the student's assignment, make sure that you have understood the lessons.

8. After completing the student's assignment, remember to post it to us. This will help you to know the progress of your studies.
9. Look after your health. A healthy mind stays alert and can study better.

Something to do:

1. Make the whole year's time-plan for your study. Write down what you will do every month of the year. Keep two months apart to prepare for the examinations.
2. Make a weekly timetable. The sample below will help you make your own time plan. (See the following table).
3. Make a list of at least six points which help you in studying better.
4. Send us your comments about this booklet "How to Study". If you have any suggestions about how one can study better, send them to us, so that your fellow students can also benefit from your suggestions.
5. Draw a flow-chart showing how you study your lessons.

You should practise reading, speaking and writing English as much as possible. Your knowledge of English will develop further by reading newspapers, notices, story books.

The full scope of study is provided by giving details of each course in the form of objectives, the skills that it aims to provide and the aspects that would need special attention for better performance. A sample is reproduced.

Mathematics

It is generally thought that Mathematics is a difficult subject. But, in fact, mathematics is a fascinating and useful branch of knowledge. Mathematics is considered as the foundation of many sciences like physics, chemistry and astronomy. Mathematics is widely used today in the study of social sciences like economics, psychology and sociology. Commerce and engineering courses have mathematics as their basis.

In everyday life mathematics has great significance. We have to use the knowledge of mathematics in daily activities like calculating time, in commercial dealings and in measuring materials.

Your course in mathematics has been devised in such a manner that it may be applied usefully in daily life. We will learn ready calculations and develop the faculty of proper and logical thinking.

Mathematics cannot be understood by reading it like a story. This subject demands practice. Therefore, while studying mathematics, you should keep on using pen and paper also. Mathematical formulae are very important. You should write them down separately and learn them. In solving mathematical problems steps are very important and if one step is missed the answer goes wrong. Therefore, solve your questions carefully step by step.

For Support Services, the manual explains the functions of Study Centres. It gives general hints under such headings as the things to remember, first day at the centre, distribution of study materials, assignments etc. It also gives guidance regarding contact people in the system, nature of information provided, remittance of fees, changing from one course to another or changes in the medium of instruction. The brochure also highlights actions to be taken by the learner to enrol himself for the examination. A series of practical suggestions are provided in the sections "Preparation before the Exams", "In the Examination Hall" and "How to write a good answer". The purpose is to encourage the learners to approach the examinations with a greater degree of confidence. The following extract illustrates this advice:

In the Examination Hall

Generally students feel nervous even at the mention of the word "examination". If you bear in mind the following it will be easier for you to study for examination.

1. After preparation sleep well the night before the examination so that you are able to concentrate in the examination hall.
2. Read the question paper carefully.
3. Make note of the instructions given in he paper. Sometimes students do not pay attention to the instructions and write long answers where short answers are required.
4. Allocate your time according to the questions. Often students devote more time to the first question and there is very little time left for the last question.
5. Attempt those questions first whose answers you know thoroughly.
6. Attempt all compulsory questions.
7. Make graphs, sketches, etc according to the instructions given in the paper.

How to write a good answer

1. Understand the question after reading it carefully.
2. Note down in the beginning the points on a page in your answer book in respect of questions you wish to answer. Cancel them out afterwards.
3. Do not write too much. Answer questions to the point. Main points should be underlined.
4. Use simple language. Make short sentences. Use you own language.
5. Your hand-writing should be neat and clear so that the examiner can read it easily.

Save some time for revising your answers. You will thus be able to remove many mistakes.

Comments

The manual answers several questions that could be anticipated from the learners and thus assists them to understand the system to which they are attached. It helps to motivate them to regulate and organise their studies according to their needs. The manual can serve as a specimen for trainers to help distant educators and planners prepare similar manuals or study guides for students which suit the specific needs of their systems. The scope of the manual could be further broadened by adding such features as:

1. the process of learning in distance education systems as distinct from the formal system of education;
2. the need for learner's initiative and accountability to himself;
3. the skills of taking notes and extracts from printed materials with practical illustrations;
4. listening skills for audio-programmes and skills for observing video programmes if multimedia facilities exist;
5. lists of other sources outside the system where reference facilities could be available;
6. specimens of good answers highlighting their characteristics; and
7. check lists and rating scales for self assessment.

The manuals could be further supplemented by developing video programmes to widen the base of learners' information and which may focus on:

1. different operations of the system related to the learners;
2. interaction of the students with the tutors, counsellors and fellow learners in study circles, etc;
3. interviews with selected teachers and their learning strategies; and
4. success stories of other learners and the constraints they suffered from.

Carefully prepared study guides and similar supportive devices can serve as bridges between the individuals and the systems and to generate the feeling of a responsive partnership between them.

B. Innovative Motivation of Students (New Zealand)*

The Advanced Studies for Teachers Unit (ASTU) offers papers for post graduate qualifications for teachers. In recognising the difficulties experienced by students studying at a distance the ASTU has prepared a series of four small booklets which are designed to assist students in the distance learning process. The booklets are characterized by their simplicity, their use of colloquial language, and their humour. This non-threatening presentation is designed to reduce stress and encourage confidence.

* See Annex IV.

1. **"How to survive in distance education"**

This is an introductory booklet which provides information on the following:

* Persistence and commitment
* A balance in life
* A place and a space
* Organising time
* Putting pen to paper
* Clubbing together
* Seeking help
* Keeping at it

Being illustrated with cartoons, the booklet is a very bright introduction to distance study. Important topics, which are dealt with briefly in this booklet, are developed in more detail in other guides provided by the ASTU.

2. **"Study groups"**

In recognising that there are advantages to the learning process if students can spend time together, the ASTU provides for the establishment of study groups. These group meetings provide an opportunity for students to meet with others to discuss topics studied and to share ideas. The booklet suggests that each meeting is led by one of the students acting as seminar co-ordinator, and usually at least six such meetings are held during the year, to ensure that course material is covered adequately. Because of the expected commitment to seminar meetings, study group members have a reduced load of individual assignments to complete as part of their course-work.

Study group members have two tutors:

a. An ASTU tutor is nominated by the Dean, ASTU. This tutor assesses the two written assignments required.

b. A local tutor, also selected by the Dean, ASTU. This tutor attends the seminars and assesses the quality of each student's seminar. The members of study groups who meet all the requirements may sit the external examination.

The ASTU puts controls on the study groups as follows:

CONDITIONS FOR THE ESTABLISHMENT AND OPERATION OF STUDY GROUPS

a) Study groups will only be established in areas where no suitable face-to-face tuition is provided by the local teachers college. Co-ordination of group establishment is placed in the hands of a local ASTU agent, through whom all group members must enrol. The local agent also

makes the arrangements for an initial establishment meeting of the group, which all prospective members should attend.

b) There must be a minimum of six students for a study group to be formally established.

c) Once the group is established, each student must comply with the following study requirements:

i. Two written assignments (chosen from the Assignment Schedule, but not related to the seminar topic selected). They will be assessed by the ASTU tutor.

ii. Presentation of one seminar. Seminars are related to the topics covered in each one of the six study guides. All study group students will receive a Handbook which will include detailed guidelines for seminar presentation. Seminars will be evaluated and assessed by the local tutor.

d) Attendance is obligatory at all seminars. If non-attendance occurs, a third written assignment is required.

e) The Unit reserves the right to make the final decision as to which groups should proceed, based on the resources available.

3. **"Writing assignments"**

The booklet introduces this topic by noting that there is no one way to write an assignment, though scholarly conventions permit less latitude in presenting material. The stages or steps in producing an assignment are noted as follows:

a) Background reading

Before you begin reading, you will find it helpful to do these things:

* Take a little time to decide broadly what you would write under that chapter heading and therefore what you expect to find.
* Read any summary of the chapter that may be given. It may be at the beginning or at the end. This gives the main points round which to collect supporting evidence as you read.
* Glance over the chapter to see what sub-heading are used.
* Then begin to read. Stop for checking, for reflection, for re-reading if necessary to clarify a point of doubt in your mind.
* Take time after completing the reading to recall the main points. Re-read if you need to, but you will not find it necessary as a rule if the above steps are followed.

b) Making study notes

When approaching a new topic, it is useful to think over the main questions you will want answered. Jot the questions down. A good technique is to write each

question at the top of a piece of paper leaving space underneath for noting relevant points. As you read, more questions will occur to you jot these down as well. In finding the answers to these questions, you will get a good coverage of the topic.

Remember there can be no learning without understanding. The printed work is only the starting point for your thinking. Pause frequently to consider what the writer really means. Master any new words or technical terms as they occur. You may wish to keep a glossary of such terms. When you feel you understand a topic thoroughly, you can clarify your ideas by trying to put them down on paper, in the form of a note-summary. It is useful to organize notes round the main topics and have these well indexed for easy reference.

The choice of headings for the indexed notes is of prime importance. A useful start is to take the main headings listed in the prescription. These main headings can then be broken down into sub-headings made and general reading. If the notes are too full, the result is really just another textbook. It is much better to tabulate. This saves time and makes revision easier.

4. **"Preparing for examinations"**

This booklet, the final in the series, provides assistance to students preparing for examination. The first section of the booklet gives advice on reading the examination paper carefully, to determine if there are compulsory question to be answered, sections from which questions must be chosen, and relative values of questions. Suggestions on the allocation of time within the paper are also made. An extremely useful section of the booklet is that devoted to describing the types of questions which might be asked. Attention is given to the words used in the question and to the different implications which these words have for the answers to be written.

Comments:

This series of booklets can serve as a good model for the provision of study advice to students. They are simple, easy to read and would be readily adaptable to most situations.

II. EXTENSION STUDY MATERIALS

(The University of the South Pacific)*

Often, new study materials are prepared by academics unfamiliar with the system. It is a difficult and sensitive task to initiate such personnel into the system without some rejection from them. In an effort to overcome this problem the University of the South Pacific has developed four booklets: "Introducing Extension Studies", Choosing a Textbook for Extension Students", "Want to Make an Audio-tape" and "Writing a Course for Extension Studies". It was envisaged that the booklets would provide information which could be perused at the convenience

* See Annex IV.

of the academic staff. The first three of these booklets are presented here, the fourth currently being at the production stage. In the following presentations, the essence of each booklet is given:

A. "Preparing the course writer of extension study materials"

This fourteen-page booklet introduces a new academic staff member to the system by: establishing the learner perspective by means of outlining the nature and scope of the institution and its facilities and describing the average learner's socio-economic status and environment; advising on the implementation of a course; and providing a glossary of the terminology commonly used in the system. Descriptions are full but precise, for example:

* *How important is extension studies?*

Each year we offer around 120-130 Preliminary, Foundation, Degree and Vocational courses by extension. Enrolments are between 7000 and 8000 a year.

* *How do extension studies courses compare with those offered on campus?*

Most Extension courses have the same titles, codes, and prescriptions as those on campus. Some Extension courses are not taught on campus. For example, the Certificate in Teaching English as a Second Language, and the Certificate in Librarianship, are only offered through Extension.

* *Can anybody write an extension course?*

Special techniques and skills are needed but these can be learned. The right attitude is all important. Our Course Developers can help anyone with the right attitude become a successful Extension course writer and teacher. (Being a successful Extension teacher requires special skills and attitudes also.)

* *Are extension students different to on-campus students?*

Extension students have problems that are different to those of the on-campus student. For example most extension students:

i. support a wife and children and have full-time employment

ii. do not enjoy the same facilities that on-campus students have (e.g., easy access to computers, libraries, lecturers and seminars),

iii. work in isolation with few, if any, other students to discuss matters with,

iv. because of distance, wait a long time to get feed-back from lecturers about their assignments

v. suffer an identity problem in that they have little or no idea of what the University of the South Pacific is really like. (Many cannot even visit their local Centres).

Developing extension courses

Extension study is made available through the combined efforts of staff in the department of the Schools and Institutes of the University, Extension Services and the University Media Unit. Staff from these three sections of the University combine to form course development teams to work together to develop and produce extension courses. A course development team consists of a course writer (or writers) from within the teaching department or institute, a course developer from Extension Services and members of staff of the Media Unit as determined by the media requirements of the extension course being developed. The course developer, with his/her knowledge and experience of distance education, is primarily responsible for providing advice on the instructional design of the extension course. To this end he/she offers advice on targeting the writing of the course towards the USP extension student, on how to structure the course effectively and realistically within the time constraints of the semester, on language levels, style and effective use of media. Facilities available include audio and video studios, graphics and a photography section. The course developer is responsible for liaising with staff in the media unit for any media input required for extension courses.

Together, particularly during preliminary discussions and the planning stages of the course, members of the course development team work towards producing an effective extension course using the skills and experience that each member brings to each meeting. To give some idea of the range and level of extension courses and enrolments for the last year refer to the Enrolment statistics provided with this book. Clearly Extension Studies has come a long way from the two courses and the small number of students who first enrolled in 1970.

* *How helpful are certain teaching methods?*

Satellite tutorials, local tutorials, tutorials conducted by visiting lecturers, radio broadcasts and video-cassettes are all supplementary teaching methods that only some students have access to. Consequently, these teaching methods, valuable as they are, are used only to further clarify and explain content. Lecturers cannot introduce new course content through these media thereby disadvantaging students who do not have access to such teaching situations.

* *How important is student feedback?*

The speed with which assignments are marked and returned to extension students and the quality and tone of tutor comments are crucial for the continuing success of extension students.

* *Teaching by extension is a co-operative effort.*

Teaching by the extension mode involves the co-operation of a great many people (writers, markers, tutors, course developers, Centre staff, media experts, satellite operators, word processing staff, printers, administrative staff etc). The system works well because everyone involved co-operates to make it work.

Self-learning materials

In effect then, an introduction is being performed at a distance, and to bring the system closer, photographs of personnel with whom the writer will work are used as illustrations.

Thus:

Comment:

This booklet can serve as a model for the production of similar booklets pertaining to a specific system. Of particular note is the idea of familiarizing new academics in a more effective way.

B. Choosing a Textbook for Extension Courses

This seventeen-page booklet takes the developer of educational materials through the steps for choosing a textbook (prescribed reference book) for any course, with the emphasis on courses in the distance learning mode. Beginning with a rationale for using a textbook, the booklet then states three main criteria for the selection and the limitations there are from the student perspective in this institution.

That is:

There are three main criteria:

- Appropriateness
- Readability
- Availability

Before examining these three criteria in detail it is important to realise two general limitations to the use of texts. In the first place no single text can be ideally suited to the interests and abilities of all the students taking a particular course. Extension students, like any others, are heterogeneous in that they, vary according to background, potential, previous knowledge, interests and methods of learning. A text is written for the "average" student by a writer or writers who usually share similar views regarding what a student should know.

In the second place it needs to be realized that a text is, in effect, a source of information in that it provides a given body of knowledge together with hopefully clear examples and explanations. As such, most text-books fall far short of a well designed set of extension study learning materials which include a more personal approach, the use of self-assessment questions and the application of sound learning theories. The three criteria are then discussed in detail with examples presented in an innovative format.

1. **Legibility of print**

On the next page you will see some comments about various types of print. 11 point is recommended as the optimal size of type for ease and speed of reading for adult readers. In addition, some general statements about textbooks for various subject areas are made. For example

a) English

At tertiary level there is little justification for choosing literary works on the basis of their readability, except perhaps when they need to be ranked in terms of degree of difficulty.

The size of type is measured in terms of point size; a point is 1/72 of an inch. This is set in *18 point*, i.e. the distance from the top of a *k* to the bottom of a *q* is 18/72 of an inch.

This is an example of *14 point.* Experimental results (see, for example, Watts and Nisbet, 1974, or Tinker, 1963), suggest that for beginning readers a point size in the range *14 point* to *18 point* is most effective.

This is an example of *12 point.* Type sizes in the range *12 point* to *14 point* are recommended for seven- to eight-year-old children.

This is an example of *11 point.* This is recommended as being the optimal size of type for ease and speed of reading with adult readers.

This is an example of *10 point.* The range *10 point* to *12 point* is recommended for children aged from nine to thirteen years.

Finally, this is an example of *8 point.* This is reckoned to be the smallest size of type which should be used for continuous prose, even for adult readers.

Interestingly enough, poor or beginning readers do not necessarily suffer as a result of this loss of information; in fact the reverse is the case. Upper case

letters are better known by poor or beginning readers than are lower case letters, and when read singly they are more legible than lower case. For fluent readers, then, lower case is best, but for poor readers, particularly if it is wished to focus attention on individual letters, upper case may be of value.

THIS IS AN EXAMPLE OF UPPER CASE TYPE (.E. USING CAPITAL LETTERS ONLY). UPPER CASE IS READ MORE SLOWLY BY ADULTS AND MOST PEOPLE DISLIKE READING IT. FLUENT READERS USE OVERALL WORD SHAPE AS A CUE, AND THUS A LINE OF UPPER CASE PRINT CONTAINS FOR THEM LESS INFORMATION THAN ONE WHICH HAS THE ASCENDERS AND DESCENDERS OF LOWER CASE TYPE.

b) Maths

Generally maths texts are relatively easy to read as the words stress operations, whilst the concepts are portrayed in figures and mathematical symbols.

c) Science

Be careful to choose books which are consistent in their level of readability. Inexplicable variations may occur especially if texts are poorly edited. Investigators have revealed high degrees of inconsistency.

d) Social Science

Students have great problems with readability because of frequent:

i. conceptual complexity and density of material
ii. poor style
iii. structural complexity and vocabulary and syntax
iv. lack of precision in the use of words
v. changes of meaning of words in particular contexts.

Finally, there is a step-wise description of the procedure by which the course writer orders the selected textbook. The underlying serious nature of the information presented is lightened and made more easy to accept with the use of cartoons as illustrations.

Comments:

With only some minor changes to suit a specific environment/institution, for example, the procedure for ordering, this brief booklet is otherwise universally usable.

C. Making an Audio-tape

An eleven-page manual detailing the making of an audio-tape to supplement printed study materials for the distant learner. It begins with a rationale for using an audio-tape.

Why use audio-tapes?

Audio-tapes have an advantage over video-tapes and other sophisticated technology in that:

* They are relatively inexpensive
* They are reasonably straightforward to produce
* Every extension student has access to a cassette-player. (Remember satellite tutorials and videos reach only those students who can attend Study Centres).

There are several good reasons why lecturers should seriously consider using audio-tapes:

* Audio-tapes can help to motivate students
* Audio-tapes are a means of making studying more personal since something of the lecturer's personality comes over on tape
* Some students prefer to listen rather than to read all the time. Listening provides some variety
* Audio-tapes can be used INTERACTIVELY. In other words students can actually be asked to complete certain tasks as they listen to their tapes
* Audio-tapes can be used as a form of TWO–WAY COMMUNICATION
* Listening to a human voice can be modulated to make use of pitch, sound, pace, pause, phrasing, inflexion and tone
* Audio-tapes can be used to impart information not included in the course materials since it can be assumed that all students have access to cassette players.

Then follows a precise outline of the procedure by describing pre-recording stages of the planning to cover the duration of the tape, the form it will take, and presents a generalized example of a plan. This is reproduced below.

Audio-tapes that provide VARIETY. For example a tape may have the following components:–

Introductory comments by the lecturer	4 min
Pause while students write answers to lecturer's question	
Further comment by lecturer	3 min
Second speaker	2 min
Pause for another activity	
Short interview	10 min
Comment by lecturer	4 min

Pause for another activity	
Summary by lecturer	3 min
Closing music	1/2 min

Further on, the full details of a planned audio-tape are presented.

Thus:

Tape 3 Poetry Appreciation

Aim: To enable students to better appreciate Ruperake Petaia's poem "Kidnapped".

Plan	Tape Playing Time
Music of Western Samoa fading to allow dubbing.	1/2 min
Introduction by first tutor who explains what the tape is designed to achieve and how this will be done.	4 min
Activity 1. Students read carefully through the poem two or three times.	
Finally they read the poem out loud and record it on their tape.	2 min
Second Tutor explains the context of Ruperake Petaia's poem.	5 min
First Tutor reads the poem	1 min
Activity 2. Students rewind the tape and compare their reading of the poem with that by the tutor. Make brief notes.	
Second tutor outlines his/her reaction to the poem and gives some examples	5 min
Activity 3. Students asked to re-read "the poem" and record their reactions	
First Tutor explains the use of imagery and gives an example	5 min
Activity 4. Student find and record examples of imagery in "Kidnapped."	
Second Tutor runs through examples of imagery in "Kidnapped".	2 min

First Tutor summarises briefly what has been covered in this tape and invites students to make comments on side 2 and return these to the tutor for comment.	3 min
Total time	28 min

Points to notice in this plan are:–

The first tutor tells students what he/she is going to tell them, and then tells what he/she told them.

The tape is interactive. At four points students have to DO something. There is variety – two speakers, music and plenty of activity.

The whole tape only takes 28 minutes of actual playing time. Students have an opportunity to respond on tape thereby making the medium two-way communication.

Finally, illustrated by a photograph of studio personnel at her machines, there is a section on the actual recording, with friendly and explicit advice on this last stage.

Making the recording

It is important that studio appointments are kept punctually. Studio time is valuable and limited. Once a decision has been made to make a recording, and the studio has been booked, that time is yours and no one else's. Please get to the studio in good time. If your course developer has delivered a second copy of the script a few days' beforehand the operator can set up microphones and tape machines in advance. When a booking has been made, the studio will be adjusted, microphones tested, etc. All this is time-consuming and expensive in time. That's why we ask you to be scrupulous about appointments.

Finally, a few clues that will help in the studio:

* Try to relax
* Refresh your memory of the script before going to air but DON'T read it
* Remember to sound enthusiastic!
* Use a formally paced conversation tone
* Smile and be happy as you talk – smiling actually makes you sound more "friendly".
* Avoid rustling your script papers. It's a good idea to fold over a top corner to make a "dogs-ear" so that a script page is easily turned over without a sound.
* Don't be overly concerned if you make a few small mistakes (actually sounds more natural) but avoid wandering off the script or taking up too much time on a certain point.
* To help you to keep an eye on the time, set a clock watch to start right on the hour as you begin your recording. Note on your script important times. For example:

Finish Introductory talk	6 mins, past hour
Extract from 1812 overture fades out	9 mins past hour
Discussion about orchestration finishes at	12 min past hour and so on . . .

Comments:

This compact booklet contains useful information that is widely applicable with only minor changes for any specific system.

III. THE MULTIMEDIA APPROACH

A. Developing a Source Book for Distance Education

(Republic of Korea)*

The Republic of Korea has committed itself to the use of the broadcasting media, coupled with traditional correspondence techniques, in the distance education programmes it offers. Two institutions, the Korean Air and Correspondence High School (KACHS) and the Korea Air and Correspondence University (KACU), have developed distance learning programmes using this instructional strategy. Multimedia packages have been developed incorporating various print and non-print resources into the system. These packages enhance the learning process by promoting participation in meaningful activities.

The range of media available for institutional use includes:

* printed texts, workbooks, study guide, newspapers
* radio and television broadcasting
* audio and video cassettes
* computer assisted instruction
* face-to-face seminars and tutorials
* slides, film strips, movie films.

At a recent symposium in the Republic of Korea, personnel from KACHS, KACU and other educators held discussions on the educational use of these media. The outcome of this symposium is a number of publications which form the basis of a source book for programme developers. This article limits its comments to those instructional techniques which make use of the broadcasting media and provides information related to their strengths and weaknesses as follows:

1. Radio broadcasting

As most countries have a nationwide broadcasting system, students have easy access to radio, a technology which produces few fears because of its familiarity. The preparation of material for broadcasting is less technical than more complex technologies and distribution costs are low. Further, students are able to record off air, enabling replay of lessons.

Against this, transmission times are not always convenient for students. Also the medium is not interactive and students lack control of the material that they are working with.

When planning to use radio broadcasting as a teaching tool it is essential to take these disadvantages into account. The teacher and the technical producer need to work together to match the content of the programme with the format of delivery. The function must match the format.

* See Annex IV.

2. Audio cassettes

The uses of audio cassettes are more flexible than radio transmission. There is no time control, no fixed time of transmission, the student has control of the material, and it can be easily combined with print material or other resources such as charts, tables, graphs, pictures and slides. Further, the audio cassette enables interactive learning through providing the opportunity for the student to record information to be sent to the teacher. The audio cassette can be used to record programmes off air, enhancing the radio broadcast as a teaching tool.

3. Television broadcasting

Some of the problems for the distant student that affects radio also applies to television. There are problems of convenient air time, ephemerality and lack of student control of the material that they are working with. But it is worth remembering that there are programmes that you might only want the student to see once and there are many examples of good well structured television programmes. A major advantage is the ease of distribution and the growing possibility of recording off air.

It is with the television programme that students working alone need most help. How are they meant to use the material and integrate it with their other learning? We need to do far more to brief and instruct students on using a media that they have not consciously used for learning before. Media literacy does go beyond following the evening news, enjoying a play or watching a programme on natural history. There is no reason why we should expect students to use a television programme effectively unless we have helped them to do so. What do we require the student to do or know before viewing? What are they expected to do during viewing? What must they follow up with afterwards in order to consolidate the information or skill that they have just been taught?

4. Video cassettes

The advantages of this technology parallel those of audio cassettes. The addition of visual material to that of print and sound increases further the opportunities for teaching and learning.

The current major disadvantage of the use of this medium is one of cost. Initial production costs are high for the teaching institution although reproduction costs are relatively cheap. Further, many students will not have access to playback facilities, making the use of video cassettes limited at the present time.

5. Microcomputers and Computer Assisted Learning (CAI)

Of recent advances in educational technology, microcomputers provide wider scope for the development of interactive teaching/learning programmes. Quality software enables students to respond to questions or instructions and receive immediate feedback on their progress. To date, educational technologists have not fully capitalised on the opportunities provided by this medium. Research into development of CAI is still in its infancy.

Comment:

In association with the Korean Educational Development Institute (KEDI), both KACHS and KACU continue to conduct research into the multimedia approach to distance education. The knowledge and experience obtained to date from this research is readily transferable to countries in the region.

B. "Teleconferencing: Designing a Distance Teaching Programme"

(New Zealand)*

It is recognized that the effectiveness of distance learning can be increased if there is the opportunity for face to face discussion between the students and between the students and their teacher. Often, financial or geographical constraints make a face to face component within a distance education programme impossible. This problem has been overcome in New Zealand by the development of a teleconference network – a network of education centres throughout the country which are linked together by a high quality, interactive audio system which operates through the country's telecommunications system. Each centre requires a UNITEL terminal (see comments at the end of this section), an extension speaker and table microphones. Slide projectors and video playback equipment at each site can be interlocked and thus controlled by the lecturer.

To use the teleconference network effectively within a distance education programme requires the careful planning of materials and their presentation. It demands acceptance that the teacher is an instructional technologist and that the design of the usual teaching resources and teaching style must be examined to fit this new teaching mode. If this challenge is accepted the teleconference network is a powerful teaching tool.

Suggestions for using the teleconference network are as follows:

INTERACTIVE SESSIONS – Using the Teleconference Network Effectively:

On a regular timetable the director of the course (or module) can gather all the groups together for a teleconference session. There is a temptation to treat the system as an extension of the lecture room. This leads to bad teaching. A teleconference session is a planned and integral part of a teaching programme which has been designed to assist adult students to learn. Specifically, the teleconference session helps distant students to feel:

- part of a local group studying towards a common purpose
- part of a wider group.

It is helpful to think of the teaching network as a collection of local groups which meet together on a regular schedule for a common purpose which is planned as a necessary part of the teaching.

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* See Annex I.

Self-learning materials

1. **Printed material at the Teleconference Session:**

At every teleconference session there should be printed material of one sort or another.

- For a regular course, the course book should have a section giving an agenda for each of the planned teleconference sessions. Dates, times, pre-session reading, study questions, and other relevant notes should be provided.
- Supplementary materials may be sent out for individual meetings (but note that mailing delays mean that materials must be ready for dispatch well in advance of the session).
- Charts, graphs, summaries, and even some sorts of pictures are much better displayed in printed form, rather than as slides or video. Interactive sessions held on the teleconference system are not professional conferences, with vast slide shows for an up-market presentation. They are teaching sessions with a particular learning objective. Experience shows that a session paper prepared for a teleconference meeting is useful to the student, and, equally important, saves wasted time on the system itself.

2. **Slides**

Slides needed for particular sessions need to be carefully planned, and prepared well in advance of the teaching time. Each slide that is to be shown must be copied for distribution to each teaching centre. For a regular course (or even for a short course or module) it is much better to have all the slide material in a single carousel (numbers 1-10 for session 1, 11-12 for session 2, and so on).

3. **Audiotapes**

Audiotapes can be used at the master control centre for audio illustration during the course of a teleconference. Similarly, as long as there are no temporary two-wire additions to the teaching network, a two-wire connection can be made to enable an expert to join the teleconference for part of the session.

Planning the Teleconference Session:

There are four important aspects to consider in planning teleconference sessions as a part of a teaching programme:

i. The system is designed for group interaction. Rather than being designed for basic individual learning, the teleconference session aims at providing for small groups located in different towns to meet together, share their own experience, and make use of appropriate resource persons anywhere in the country.

ii. Co-operative curriculum development is possible. One of the major benefits of the system is the ability to work with a professional group

to design aspects of the learning session in co-operation with the group. All adult (as against undergraduate) students respond better to a teaching system that recognises that expertise may reside in the experience of the student group, and this often complements the academic programme in many different ways. In a totally practical framework, short student-papers on aspects of the work to be studied are an excellent teaching device and allow a greater involvement of the student group. Learning, at a post-experience level, is usually a two-way process.

iii. Group dynamics assist in the learning process. An important aspect of this system is the ability of small groups to work together, themselves, as a part in a wider programme. Several professional groups have found this an unexpected additional benefit: a local group dynamic is often a useful adjunct to professional development courses.

iv. Immediate Response. Immediate contact with the lecturer or resource person allows another dimension to the design of the course. At the simplest level, the system provides a means for assignments to be discussed after or before assessment. Since the most difficult aspect of studying at a distance is always the isolation, the seminar aspect is obviously important.

Comments:

Teleconferencing is an effective way of increasing interaction in distance teaching. Its most valuable contribution is in providing the opportunity for the participation in seminars by small groups of students who are geographically isolated.

For further information on the teleconference system and for details of the purchasing of equipment, contact:

University Extension,
University of Otago
P O Box 56
Dunedin
New Zealand.

C. Computer Learning at a Distance

(The University of the South Pacific)*

There is considerable demand for "computers/computing" as an area for learning with the current universal trend of technological advancement. The nature of the subject of computers/computing requires a teaching approach that is practical-oriented. Taking this subject to the distance learner presents a challenge for educators in both the preparation of materials and in the actual teaching. At the University of the South Pacific, educators have developed, and are teaching, a first

* See Annex I.

year degree course for the beginner in computers/computing, using a multimedia approach. Three modes are used for the actual teaching, print, audio cassette tape and video tape. Two more are used for further student support, satellite and face to face tutorials.

1. The Print Mode

Materials in print form provide a reliable means of getting the course to the student. For this reason the core of this course is in printed form. The printed materials include: introduction and assignment booklet. These 22 page booklet is designed to be brief and uses an easy reading style.

Its purpose is two-fold:

a) To ease the student into the course. This is particularly important for a student who may be attempting the course for the first time. Here the student is given the following information:

   i. An overview of the course and its basic aims:

   This course is designed to introduce the complete beginner to computers and computing. It assumes nothing with regards to your computing background and it does not require you to have any technical knowledge of electronics. The course does not aim to make you a computer scientists, but it will enable you to make the decision whether or not you want to become one. There are further suitable courses for those interested in computer science). The primary aim of the course is to introduce people with all sorts of backgrounds to computers – how they work and how they can be used.

   At the end of the course you will be able to understand most of the publicity material for any individual computer. This will enable you to make an informed choice if you are involved in buying a computer for yourself or for a business. In addition, you will be able to appreciate the contents of the many computing magazines so that you will be able to keep up to date with the latest developments in the computing industry.

   The practical component of this course is designed to give you an introduction to two areas of computer use. Firstly, you will be using a commercially prepared set of computer programmes which could be used on an office computer to prepare typed documents and accounts.

   Secondly, you will be introduced to one method of producing your own computer programmes to solve problems using the BASIC programming language.

   ii. a brief description of all the course materials and computer accessories required for the course.

   iii. an explanation of how the course will be assessed. As the course comprises two parts, theory and practical, continuous assessment (in the form of assignments and tests) covers the student's performance in both parts. A summary of the method of assessment as it appears in the booklet is shown below.

In order to pass the course you must achieve at least 40 per cent of the marks for the final examination.

The final grade will be calculated as follows:

Assessment	% towards grade
Computing assignments	17
Theory assignments	8
Mid-course test	15
Final examination	60

2. Study guides

These are designed to guide the student through the theory part of the course in a systematic manner. For almost all sections of the theory, a reference textbook is used. The study guides therefore lead the student through the textbook by directing him/her to the required readings and provide additional explanations on any point that may need further clarification. In doing this some innovative ideas are used. For example:

* the use of bold and *underline* features to highlight keywords;
* the use of the word *read* with various qualifying terms to indicate the depth of understanding required in the reading materials.

If you are directed to *read* a section *quickly*, then you should simply read through that section once without making too much effort to absorb every detail. In most cases such sections will be mainly illustrations of how computers are used in USA, and, although this is not a crucial part of the course, you should still find such information useful and interesting. A direction to *read* a section means that you are required to understand the content. Such a section is not expected to prove too difficult, but you may well need to read it at least twice in order to ensure that you have absorbed all of the points. A section requiring *careful reading* is a very important one. This kind of section is usually crucial to your understanding either of the remainder of the chapter or of a later chapter. The section is likely to be difficult and so you should be prepared to spend time on it. The section may require reading through several times. You should make every effort to understand fully the points made in this section before moving to the next one.

3. Reference textbooks

The textbook chosen has a good coverage of course content and it is readily available. The book is used closely with the study guide.

4. Practical booklets

The two practical booklets provide detailed instructions on how the practicals are to be completed. There are nine practicals in all and each may require

one or more sessions to complete. In attempting to give clear instructions to the student, the following techniques have been used:

* using asterixes and indentation to indicate those part of the instructions where the student is required to interact with the computer.
* reproducing exact screen formats in the guides so that a student going through a particular application package or module knows that he has arrived at a particular state in the practical when he sees the format. Thus,

  * Load the file "M151WP2.DOC" into the Word Processor

    The method to do this is exactly the same as for the earlier Exercises.

    The document that you now see on the screen is a description of Open Access.

    If you have the time, then read it. However,

  * Scroll through the document quickly to get an idea about its contents.*
  * Move the cursor to the beginning of the document.*
  * Press (search)*

  The bottom of the screen shows

Word Processor – Menu
SEARCH : Press (Undo) to exit, (search) to find again
Find Marker Replace
(Arrows) (Do) (Undo) (Help) (Search)

The audio mode

A set of cassette tapes is available for use in conjunction with the practicals as an alternative method of presenting instructions or directions in order that a student is able to concentrate on the "hands-on" activity without having to switch to the printed instructions.

The video mode

Video programmes are also available to enhance the printed materials by introducing the student to the computer and covering the first two practicals. Although video facilities are less accessible than audio tapes, together they supplement the practical in assisting the student to complete this part of the course efficiently. However, they can be used independently.

The teaching and administering of the course

The course is divided into two parts, theory and practical. Each covers different aspects of the course and they are therefore independent of each other. They are studied concurrently but need not be at the same pace.

Materials for the theory include only the study guide and reference textbook. For the practicals, required materials include:

i. the hardware components – a computer which has the capacity and compatibility to run the application packages and the computer peripheral devices.

ii. the software components – consisting of disks and instruction manuals for the application of the packages and

iii. the practical booklets.

A student taking the course would therefore work through the theory using the study guide and reference textbook. Within the study guide self-assessment questions are provided at the end of each unit. This would give immediate feedback on the student's progress. For the practicals, the student can first watch the video tape which introduces the computer. He then proceeds to use the practical guides or audio tapes to lead him through each practical.

At least two hours per week are required for practical work and prescribed preparatory reading is given in the practical guide. Further support for the student and a means for monitoring progress occurs through the following additional modes:

i. Satellite tutorials

These are conducted by the course lecturer from the Central Satellite studio in Fiji and beamed simultaneously to students at regional centres (in other USP countries). This enables students to receive further assistance and clarification on the more difficult sections of the course. For the course lecturer, the satellite tutorial provides useful immediate feedback on how the students are coping with the course. In this way he can adjust his assessment schedules accordingly.

ii. Local tutorials

Each Regional Centre may organize local tutorials according to the number of students and their needs.

A local tutor is then appointed whose role is to provide further assistance to the student and be available as a resource person.

Comments:

This package as a first course in computer/computing highlights three main feature:

i. The use of multimedia in the teaching of courses for distance learning

ii. How a computer course is taught through the distance learning mode

iii. How a practical-oriented course may be taught in distance education.

While the nature of the content may not be relevant, the innovative ideas inherent in the course structure may with some modification find useful application in developing similar multimedia courses for the distance learning mode.

IV. RESEARCH AND EVALUATION

A. Using Research Support in Distance Education (Pakistan)*

The study guide is meant for postgraduate students at MA/Diploma level engaged in Educational Planning, Management/Business Administration at various levels of the system in the country. These key personnel, in turn, are responsible for training various categories of personnel in their respective organizations. The study guide is also used to train distance education personnel in Research Methods and Techniques. The following are the main objectives of various components of the Study Guide:

1. **Nature of Research**
   a) Explain the meaning of research
   b) Differentiate between pure and applied research
   c) Justify the need for research in educational management

2. **Research Design**
   a) Explain the research process
   b) Develop a research design
   c) Analyse a research design

3. **Sampling Design**
   a) Explain the need for sampling in research
   b) Selecting a good sample for a research study
   c) Know the uses and abuses of sampling

4. **Measurement and Scaling**
   a) Explain the nature and purpose of measurement and scaling techniques
   b) Arrange raw data for testing of hypothesis

5. **Use of Data (Primary and Secondary)**
   a) Identify the sources of data
   b) Explain the possible uses of data
   c) Use data in research studies and analysis

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* See Annex IV.

6. **Data Collection – I (Survey Instruments and Field Procedures)**
   a) Explain the need for survey
   b) Develop a questionnaire

7. **Data Collection – II (Observation, Simulation and Experimentation)**
   a) Explain and understand the importance of scientific tools of enquiry
   b) Collect data through observation and experimentation methods

8. **Data analysis**
   a) Explain the elements of analysis
   b) Analyse the given data
   c) Use raw data for decision making

9. **Report Writing**
   a) Write a good report
   b) Guide your colleagues and junior staff in report writing

Salient Features

The Guide is written in an adjunctive manner. It introduces a concept, a method or a technique. It gives a few examples to further extrapolate the concept or technique and asks the students to undertake some activities/exercises to practise the requisite skills. It does not cover all the details of the topic, but refers the students to three main sources for enrichment and explanation.

a. *Readings*

These sources are given in the form of:

1. Required readings
2. Supplementary resources
3. Suggested reference materials

Generally, standard textbooks covering examples from education, industry and commerce have been included in the required readings. These textbooks are all in English and are readily available in common book stores in any part of the world. Where a material is deemed to be unique, or less available in book stores, it has been reproduced in the text for immediate reference and use by the learners.

b. *Exercises/activities*

The course is essentially practical in nature. All along, the students have to undertake various exercises/activities relevant to the theme of the unit. They are required to prepare a research design, construct suitable questionnaires, prepare interview inventories, collect and tabulate data, draw findings and conclusions and

prepare final reports of their studies. These exercises help the students to develop skills in the various methods and techniques of research. These skills can be further practised through tutorial sessions and intensive end-of-course workshops.

c. *Self-assessment questions*

Towards the end of each unit, the guide gives a series of self-assessment questions to enable the students to evaluate his/her performance and to further enrich his/her studies through supplementary resources, if necessary. Accompanied with the guide are a set of assignments which are expected to be completed by the learners/users according to a stipulated schedule. These assignments are sent to only those students who are formally registered for the course.

3. Examples of research methods

a. After giving a brief introduction to *deductive and inductive processes*, this guide gives the following examples to compare these processes:

Induction

It consists of a set of one or more reasons known as evidence plus a conclusion or inference drawn from this evidence. All reasons are alleged to be factual and the conclusion explains the facts.

Induction – Deduction Sequence

Whether an argument is inductive or deductive depends on the relationship between reasons and conclusion. If the conclusion follows necessarily from the reasons, then the argument is deductive: if the conclusion is tentatively advanced to explain some fact or facts, then the argument is inductive.

Example

A simple example has been given to provide an insight into this sequence.

Induction	Deduction
Assumption (if A is B, then C is D)	Assumption (If A is B then C is D)
Fact C is D	Explanation A is B
Explanation A is B	Fact C is D

b. Under *complex probability sampling* in Unit 3 the guide explains the following method of drawing a sample.

COMPLEX PROBABILITY SAMPLING

Systematic Sampling

The most widely used version of probability sampling is probably systematic sampling. In this approach every Kth element in the population is sampled, beginning a random start with an element from 1 to 12. It is simple and flexible, eg.

You are provided 18 nuts, and asked to select 6 nuts out of them and find out their average weight?

Nut number.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Our sample then consists of:

Nut No.	Variety	Weight (mg)
2	Walnut	67
5	Filbernut	32
8	Filbernut	31
11	Peanut	12
14	Peanut	7
17	Peanut	10
	Total:	159
	Average	16½

c. Under SCALE CONSTRUCTION TECHNIQUES, the guide gives a few exercises for the students. Some of these exercises read as below:

Scale Construction Techniques

1) Arbitrary Scales

We can design arbitrary scale by collecting a number of items which we believe are unambiguous and appropriate to a given topic. To illustrate, consider the problem of conducting company image study among the general public.

Exercise

Design arbitrary scale about company's reputation. Hint: (Working condition, ecological factors, civic projects)

(Scaled – 0 to 4)

2) Consensus Scaling

In this approach the selection of items is made by a panel of judges who evaluate proposed items and determine:

a) Whether the item belongs in the topic area

b) Its ambiguity

c) The level of attitude

The most widely known form of this approach is the Thurstone differential scale. This approach, known as the method of equal appearing intervals, is an effort to develop an interval scaling method for attitude measurement. Differential studies have been used more widely in sociological studies than in business research. This approach is costly and time consuming.

3) Item Analysis

In this procedure a particular item is evaluated on the basis of how well it discriminates between those persons whose total score is higher than those whose score is low. The most popular type using this approach is the summated scale. In this approach the Likert scale is used. With this scale the respondent is asked to respond to each statement in terms of 5 degrees of agreement.

An example from a job satisfaction scale is:–

I consider my job rather unpleasant.

Strongly Agree Undecided Disagree Strongly agree Agree

4) Cumulative Scales

In this approach total scores on cumulative scales have the same meaning. We estimate all position and negative aspects with this scale. The major scale of this type is the Gotman Scalogram.

Exercise

Study in detail Scalogram response pattern and relate it with research setting of your organisation.

5) Factor Scales

The term factor scales is used here to identify a variety of techniques that have been developed to deal with two problems which have so far been glossed over.

They are:

a) How to deal more adequately with the universe of content which is multi dimensional.

b) How to uncover underlying (latent) dimensions which have not been identified.

The major scaling technique used in this context is called semantic differential which is an attempt to measure the psychological meaning of an individual.

Exercise

Consult your book and study semantic differential (SD).

6) Under *9.1 RESEARCH PROPOSAL* the following section gives the procedure in details:

a) The Research Proposal

The written proposal statement is required for a given study. The length and complexity of the same ranges widely. Business research proposals normally range from one to five pages.

b) Contents

It has two sections: First the problem statement. Take the example that management is faced with problem for locating new plant for a new market. Before its decision, a feasibility study is necessary of costs of securing existing customers, building, relocation tax and operating costs availability of local labour attractiveness for professional and management personnel. Second section includes what will be done. In this connection interviews must be conducted for gathering information in the case of new bank's branch in the locality. Moreover, other information will be gathered from published data including graphical tables, etc.

c) The Formal Research Plan

A formal research plan is essential for the conduct of research. It is often of two pages. The first page comprises the explanation of determination of dimensions. The format varies from project to project. A sample format is given in the book, you can see in its proper form.

d) Exercise

You have been invited to submit a research proposal to study how well acquainted the citizens of a big city, Karachi, are with the services and function of their local better business bureau. You accept to conduct such study through extended telephone interview with city residents. Outline what you believe are the minimum contents for such a research proposal. In drafting your answer you should feel free to use your imagination to supply information which you think is needed in such a proposal.

THE RESEARCH REPORT

Research report differs from other forms of communication in many ways. Take the example that the research communication man is the expert. He knows the subject better than any other in a sense that he provides authoritative one way

communication; secondly, it differs in a sense that enough specific information is selected for a clearly designed evidence; thirdly, it is that reporter's position is a nonpersuasive one.

a) Reports Types

Two types of reports viz; informational reports and research reports generally, present factual information in detail with no analysis, conclusions or recommendation. But research reports, it include analysis, conclusion or recommendations, etc.

b) The Short Reports

It must be widely used. It generally consists of a title page and text of less than five pages but may be in some cases two pages. Its mechanics is similar as in long reports headings with spare identifications and other similar techniques. As usual in it, problem statement, findings, conclusions and summary should be given.

c) Other Reports

Vanation is letter report. It is often used when single point is investigated. This tends to be informal and provides the conclusions called for plus supporting data to make the conclusion clear and understandable. Memorandum is a version of letter reports.

d) Long Reports

When report exceeds ten pages, it will be more impersonal and divided into table of contents, letter of transmittal, and number of exhibits; long reports might be discussed in two versions. The technical reports and popular reports.

e) The Technical Reports

These are in the form of full presentation and exploration of data including detailed findings. Techniques, for example, a detailed account of sampling field data and other research procedures, sources of data gathering instruments, data processing and other methods of analysis, are used in technical reports.

f) Popular Report

Popular report is designed for non-technical readers and executives. In this form of report the reader is interested not in the methodology, but in the findings and conclusions. He is more interested to implement these findings and to take decisions. Sometimes, it is written by one man along with his personal characteristics to take decisions. The style in question is designed to encourage rapid reading and quick comprehension of major details.

g) Exercise

What type of report would you suggest be written in each of the following cases?

i. The president of a company has asked for a study of the company's pension plan and its comparison to those of other firms in the industry.

ii. You have been asked to write a marketing experiment which you recently completed for submission of advertisement in marketing journal.

iii. Your division manager has asked you to prepare a forecast of cash requirement for the division for the next three months.

iv. The National Institute of Manpower and Planning has given you a grant to study the relation between labour and management.

Exercise

i. Format research plans obviously can take much time, energy and money to prepare. How can such an expenditure be justified?

ii. The typical student research report has many deficiencies in presentation in addition to its limitation in project design and content. Make a list of what you believe to be the major presentations/problems with student written reports and with student oral research reports.

WRITING THE REPORT

Many investigators give adequate attention to the reporting of their findings and conclusions. Moreover, report writing skill is especially valuable to the junior executives or management trainees who aspire to rise in their organization. Reporting skills may be over rated but given that this is the situation, the researcher who can write a good report will be considered for the enhancement of his job.

Pre-writing Considerations:

It also includes the outline and it is well explained in the book.

Standard of Presentation:

It includes composition readability, Gunning fog index, and use of statistics.

RESEARCH REPORT FORMAT

There is no one best pattern for all long reports. However, three arrangements are as follows:

1. Logical: Firstly it presents any information needed to orient the order; it is followed by the findings and their analysis, after the findings, follow the summary, conclusions and recommendations.
2. Psychological: After brief introduction, come the summaries, conclusions and recommendations followed by the findings which support these conclusions. This is the most popular format.
3. Chronological: This form is least desirable and least used of the three. Chronological form is often combined with one or the other formats.

Self-learning materials

Report Format Details

We can divide the report format details in prefatory pages including title page, letter of transmittal and authorization, tables of contents, charts and illustrations and synopsis. The body of report includes introduction, findings, summary, conclusions, recommendations and appendices.

Popular Report Format

A popular report is usually in psychological order, but the differences between it and the technical reports are due to the sequence. It includes title page, table of contents, objectives of study, methodology, conclusions and recommendations, findings and appendices.

Briefing:

It includes nature of briefing, preparation delivery, problems, use of visuals, etc.

Exercise

i. What are the major problems that you personally have with writing good reports. What have you done about these problems. What should you do?

ii. Outline the set of visual aids which you might use in an oral briefing on "how to write research report."

SUGGESTED READINGS

i. C William Emory, Business Research Methods, Richard D Homewood, Iliinois, USA, Chapter 14.

ii. Goods & Hatt, Methods in Social Research, McGraw Hill Book Co., Chapter 21.

4. COMMENTS

The guide is primarily meant for key personnel in business, education and social sciences. Its main purpose is to orientate the key personnel to Research Methods and Techniques. In the context of the training of personnel for the preparation of Reference Materials and Training Packages, the methods can be of immense use at various stages of development:

a. Need assessment

Before we embark upon the development of materials, it is necessary to conduct a need assessment survey of the clientele likely to be enrolled in a course. The research methods studied through this guide will help researchers to find out the exact needs of the clientele and formulate their materials accordingly.

b. Pilot Testing

All materials developed for educational purposes need to be tried out on a modest scale before launching. The survey techniques included in the guide will assist readers to conduct pilot testing of materials and improve them, wherever necessary.

c. Feedback

It is customary in any distance education system to include a questionnaire towards the end of the course to elicit student reaction on various aspects of the course. The data collection, tabulation, and interpretation techniques covered in this guide help in the analysis of data and the preparation of reports for materials development personnel in order that they can undertake effective revision of the materials at regular intervals.

d. Programme/Project Evaluation

Usually, comprehensive Programmes/Projects remain in operation for several years and even decades. In order to run these programmes/projects effectively, we need to conduct research at the formative, operational and summative stages. It is imperative for the Programme/Project staff to understand research methods and techniques. This guide teaches crucial research techniques and also provides a series of important readings which may be useful to further enrich the research potential of distance education personnel on a long-term basis. It is primarily meant for business administration personnel, but has the potential for wide scale applicability in any branch of the social sciences.

Chapter Three

FOLLOW-UP PLANS FOR NATIONAL WORKSHOPS

During the Study Group Meeting, the participants produced proposals for follow-up activities which in their opinion, should be promoted by UNESCO under APEID, as a matter of first priority. A summary description of the national workshops, formulated by the participants, is presented in tabular form:

Summary Description of Pilot National Workshops

Country	*Title of National Workshop*	*Theme or Objective*	*Implementing Agency*	*Participants and Audience*	*Duration (Date of Completion)*	*Outcome*	*Consultants & support (where applicable)*
India	National Pilot Workshop for Development of Training Manual in Distance Education	1 Identify materials available in the country on Distance Education 2 Classify the the material according to its uses and the categories for which it could be useful. 3 Evolve criteria for review of the materials available. 4 Prepare review of the selected materials belonging to different media and useful for different personnel.	1 Indira Gandhi National Open University, New Delhi. 2 Open school, Cen-Central Board Secondary Education, New Delhi.	1 Directors, Schools of Correspondenc Education of different Universities or their nominees responsible for training and production of course materials. 2 Similar personnel from State Open Schools or Institutes of Correspondence Education, eg Patrachar Vidyalaya.	October 1988 (10 days)	Preparation of Training Manual	1 On Expertise 2 Experts on distance education from CUET (INCERT)
New Zealand	Distance Education Course Development	Training Course: Development of distance education programmes	NZ Department of Education	Course Developers in Distance Education in NZ	October 1988 (10 days)	Manual on course development	Local resource personnel
Pakistan	Writers of Distance Education materials	To prepare a training package for distance educators, with emphasis on 1. Formulation of of objectives 2. writing of DE materials 3. incorporating exercise/activities 4. development of self-assessment questions	Faculty of Education, Allama, Iqbal Open University Islamabad	Twenty key personnel in DE (10 from OU 10 from other institutions)	April, 1988 (one week)	Training Package	One international expert if possible

Summary Description of Pilot National Workshops *(continued)*

Country	*Title of National Workshop*	*Theme or Objective*	*Implementing Agency*	*Participants and Audience*	*Duration (Date of Completion)*	*Outcome*	*Consultants & support (where applicable)*
Republic of Korea	Evaluation of correspondence materials used for out-of-school students	Development of Evaluation materials and their assessment	KEDI	Correspondence High School Teachers and Supervisors and University teachers	October 1988 (7 days)	Improvement of instructional strategies and methods	Consultant from New Zealand
Countries of the University of the South Pacific region	"Science for All in the Pacific:	Designing a relevant science curriculum * planning * organising * writing for – teachers – pupils * implementing * evaluating	The USP and Education/ Ministry of each country	Science curriculum writers – one representative from each of eleven countries	Two weeks	A guide for curriculum writers focussing on science education	The University of the South Pacific personnel

ANNEX I

SOURCES OF ORIGINAL MATERIALS

1. Learning to Learn

a. "How to study"
Source: Open School
39 Community Centre
Wazipur Industrial Centre
New Delhi – 110049
India

b. "How to Survive in Distance Education"
Source: Advanced Studies for Teacher Unit
Palmerston North Teachers College
Palmerston North
New Zealand

2. Extension Study Materials

a. "Introducing Extension Materials"

b. "Choosing a Textbook for Extension Studies"

c. "Want to Make an Audio-tape"
Source: The University of the South Pacific
Suva
Fiji.

3. The Multimedia Approach

a. i. "Utilization of Multimedia Packages in Distance Education:
Source: Korean Air & Correspondence university
Seoul
Republic of Korea

ii. "Using Television in the Korean Air and Correspondence High School"
Source: Korean Educational Development Institute
Seoul
Republic of Korea.

b. "Designing a Distance Teaching Programme at the University of Otago"
Source: University Extension
University of Otago
Dunedin
New Zealand

c. "Introduction to Computing"
Source: The University of the South Pacific
Suva
Fiji

4. Research and Evaluation

a. "Study Guide on Research Methods and Techniques:
Source: Allama Iqbal Open University
Islamabad, 1986
Pakistan.

Summary Description of Pilot National Workshops *(continued)*

Country	*Title of National Workshop*	*Theme or Objective*	*Implementing Agency*	*Participants and Audience*	*Duration (Date of Completion)*	*Outcome*	*Consultants & support (where applicable)*
Republic of Korea	Evaluation of correspondence materials used for out-of-school students	Development of Evaluation materials and their assessment	KEDI	Correspondence High School Teachers and Supervisors and University teachers	October 1988 (7 days)	Improvement of instructional strategies and methods	Consultant from New Zealand
Countries of the University of the South Pacific region	"Science for All in the Pacific:	Designing a relevant science curriculum * planning * organising * writing for – teachers – pupils * implementing * evaluating	The USP and Education/ Ministry of each country	Science curriculum writers – one representative from each of seven countries	Two weeks	A guide for curriculum writers focussing on science education	The University of the South Pacific personnel

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LIST OF SELECTED APEID PUBLICATIONS RELATING TO TEACHING/LEARNING MATERIALS

* Design instructional materials for general education and teacher training: a portfolio of experiences in Asia and Oceania. 1980
* Developing instructional materials for productive skills, report. 1980
* In-service teacher education: developing innovatory strategies and instructional materials; report. 1980
* Guidelines for repackaging multi-media resources. 1982
* Developing materials for biology teaching; report. 1982

Chemistry curriculum and teaching materials; report. 1982

Distance education: exemplar training materials. 1984

Preparing multi-media teaching materials; a source book. 1986

Distance learning systems and structures: training manual, Vol. II. 1987

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* *Out of stock*

The Asia and Pacific Programme of Educational Innovation for Development (APEID) has as its primary goal to contribute to the building of national capabilities for undertaking educational innovations linked to the problems of national development, thereby improving the quality of life of the people in the Member States.

All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through nearly 200 national centres which they have associated for this purpose with APEID.

The 26 Member States participating in APEID are Afghanistan, Australia, Bangladesh, Bhutan, China, Fiji, India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Malaysia, Maldives, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Socialist Republic of Viet Nam, Sri Lanka, Thailand, Tonga, Turkey and Union of Soviet Socialist Republics.

Each country has set up a National Development Group (NDG) to identify and support educational innovations for development within the country and facilitate exchange between countries.

The Asian Centre of Educational Innovation for Development (ACEID), an integral part of the UNESCO Principal Regional Office for Asia and the Pacific in Bangkok, co-ordinates the activities under APEID and assists the Associated Centres (AC) in carrying them out.

In the fourth cycle of APEID (1987-1991), altogether 14 areas of concentration are proposed, which are grouped into three major programme areas as follows:

1. Education for all;
2. Making education relevant to societal requirements; and
3. Supporting activities and infrastructures common to all levels and systems.